

US EPA ARCHIVE DOCUMENT

10/16/2009
Mr. Doug Lam
Trihydro Corporation
5000 State Route 128

Cleves OH 45002

Project Name: Hooven VI 2008-2009
Project #: 500-017-012
Workorder #: 0910198B

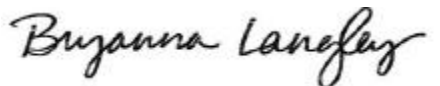
Dear Mr. Doug Lam

The following report includes the data for the above referenced project for sample(s) received on 10/7/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Bryanna Langley at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Bryanna Langley
Project Manager

WORK ORDER #: 0910198B

Work Order Summary

CLIENT: Mr. Doug Lam
Trihydro Corporation
5000 State Route 128
Cleves, OH 45002

BILL TO: Mr. Paul Michalski
Trihydro Corporation
5000 State Route 128
Cleves, OH 45002

PHONE: 513-353-1323 ext 23

P.O. # 08-050WO-L

FAX: 513-353-4664

PROJECT # 500-017-012 Hooven VI 2008-2009

DATE RECEIVED: 10/07/2009

CONTACT: Bryanna Langley

DATE COMPLETED: 10/16/2009

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VW99(5A)100209	Modified ASTM D-1946	4.0 "Hg	15 psi
02A	VW99(10)100209	Modified ASTM D-1946	3.0 "Hg	15 psi
02AA	VW99(10)100209 Lab Duplicate	Modified ASTM D-1946	3.0 "Hg	15 psi
03A	VW99(15)100209	Modified ASTM D-1946	4.0 "Hg	15 psi
04A	VW99(20)100209	Modified ASTM D-1946	4.0 "Hg	15 psi
05A	VW99(25)100209	Modified ASTM D-1946	3.5 "Hg	15 psi
06A	VW99(30)100209	Modified ASTM D-1946	5.0 "Hg	15 psi
07A	VW99(35)100209	Modified ASTM D-1946	3.0 "Hg	15 psi
08A	VW99(40)100209	Modified ASTM D-1946	4.5 "Hg	15 psi
09A	VW99(45)100209	Modified ASTM D-1946	4.0 "Hg	15 psi
10A	BD1100209	Modified ASTM D-1946	6.0 "Hg	15 psi
11A	VW96(50)100209	Modified ASTM D-1946	3.5 "Hg	15 psi
12A	VW96(55)100209	Modified ASTM D-1946	3.5 "Hg	15 psi
13A	VW96(60)100209	Modified ASTM D-1946	3.5 "Hg	15 psi
14A	VW99(50)100209	Modified ASTM D-1946	3.0 "Hg	15 psi
15A	VW99(55)100209	Modified ASTM D-1946	5.0 "Hg	15 psi
15AA	VW99(55)100209 Lab Duplicate	Modified ASTM D-1946	5.0 "Hg	15 psi

Continued on next page

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DATE RECEIVED: 10/07/2009

CONTACT: Bryanna Langley

DATE COMPLETED: 10/16/2009

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
16A	VW99(60)100209	Modified ASTM D-1946	4.0 "Hg	15 psi
17A	TB-1, 100209	Modified ASTM D-1946	27.0 "Hg	15 psi
18A	Lab Blank	Modified ASTM D-1946	NA	NA
18B	Lab Blank	Modified ASTM D-1946	NA	NA
19A	LCS	Modified ASTM D-1946	NA	NA

CERTIFIED BY:



Laboratory Director

DATE: 10/16/09

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified ASTM D-1946
Trihydro Corporation
Workorder# 0910198B

Seventeen 1 Liter Summa Canister (100% Certified) samples were received on October 07, 2009. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Since Nitrogen is used to pressurize samples, the reported Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>ASTM D-1946</i>	<i>ATL Modifications</i>
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections $> 5 \times$ the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The trip blank sample TB-1, 100209 has a reportable level of Oxygen present. Reanalysis confirmed the initial result.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: VW99(5A)100209

Lab ID#: 0910198B-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	4.9
Nitrogen	0.23	89
Methane	0.00023	0.70
Carbon Dioxide	0.023	5.4

Client Sample ID: VW99(10)100209

Lab ID#: 0910198B-02A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	7.2
Nitrogen	0.22	86
Methane	0.00022	0.63
Carbon Dioxide	0.022	5.8

Client Sample ID: VW99(10)100209 Lab Duplicate

Lab ID#: 0910198B-02AA

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	7.1
Nitrogen	0.22	86
Methane	0.00022	0.63
Carbon Dioxide	0.022	5.7

Client Sample ID: VW99(15)100209

Lab ID#: 0910198B-03A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.8
Nitrogen	0.23	82
Methane	0.00023	5.9
Carbon Dioxide	0.023	10

Client Sample ID: VW99(20)100209

Lab ID#: 0910198B-04A

Summary of Detected Compounds

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: VW99(20)100209

Lab ID#: 0910198B-04A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.7
Nitrogen	0.23	78
Methane	0.00023	8.5
Carbon Dioxide	0.023	11
Ethane	0.0023	0.0026

Client Sample ID: VW99(25)100209

Lab ID#: 0910198B-05A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.8
Nitrogen	0.23	82
Methane	0.00023	5.4
Carbon Dioxide	0.023	11

Client Sample ID: VW99(30)100209

Lab ID#: 0910198B-06A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	2.1
Nitrogen	0.24	78
Methane	0.00024	8.8
Carbon Dioxide	0.024	11
Ethane	0.0024	0.0026

Client Sample ID: VW99(35)100209

Lab ID#: 0910198B-07A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	1.6
Nitrogen	0.22	76
Methane	0.00022	11
Carbon Dioxide	0.022	11
Ethane	0.0022	0.0034

Summary of Detected Compounds

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: VW99(40)100209

Lab ID#: 0910198B-08A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	1.7
Nitrogen	0.24	76
Methane	0.00024	11
Carbon Dioxide	0.024	11
Ethane	0.0024	0.0035

Client Sample ID: VW99(45)100209

Lab ID#: 0910198B-09A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.8
Nitrogen	0.23	76
Methane	0.00023	11
Carbon Dioxide	0.023	11
Ethane	0.0023	0.0034

Client Sample ID: BD1100209

Lab ID#: 0910198B-10A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	1.8
Nitrogen	0.25	77
Methane	0.00025	9.2
Carbon Dioxide	0.025	12
Ethane	0.0025	0.0027

Client Sample ID: VW96(50)100209

Lab ID#: 0910198B-11A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	2.3
Nitrogen	0.23	68
Methane	0.00023	19
Carbon Dioxide	0.023	10
Ethane	0.0023	0.0095

Summary of Detected Compounds

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: VW96(55)100209

Lab ID#: 0910198B-12A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.4
Nitrogen	0.23	67
Methane	0.00023	20
Carbon Dioxide	0.023	11
Ethane	0.0023	0.0099

Client Sample ID: VW96(60)100209

Lab ID#: 0910198B-13A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.1
Nitrogen	0.23	67
Methane	0.00023	20
Carbon Dioxide	0.023	11
Ethane	0.0023	0.0096

Client Sample ID: VW99(50)100209

Lab ID#: 0910198B-14A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	2.3
Nitrogen	0.22	77
Methane	0.00022	10
Carbon Dioxide	0.022	10
Ethane	0.0022	0.0039

Client Sample ID: VW99(55)100209

Lab ID#: 0910198B-15A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	2.1
Nitrogen	0.24	75
Methane	0.00024	11
Carbon Dioxide	0.024	11
Ethane	0.0024	0.0038

Summary of Detected Compounds

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: VW99(55)100209 Lab Duplicate

Lab ID#: 0910198B-15AA

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	2.1
Nitrogen	0.24	75
Methane	0.00024	11
Carbon Dioxide	0.024	11
Ethane	0.0024	0.0037

Client Sample ID: VW99(60)100209

Lab ID#: 0910198B-16A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	4.8
Nitrogen	0.23	86
Methane	0.00023	1.0
Carbon Dioxide	0.023	8.0

Client Sample ID: TB-1, 100209

Lab ID#: 0910198B-17A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	0.17
Nitrogen	0.10	100

Client Sample ID: VW99(5A)100209

Lab ID#: 0910198B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101429	Date of Collection: 10/2/09 2:45:00 PM
Dil. Factor:	2.33	Date of Analysis: 10/14/09 07:41 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	4.9
Nitrogen	0.23	89
Carbon Monoxide	0.023	Not Detected
Methane	0.00023	0.70
Carbon Dioxide	0.023	5.4
Ethane	0.0023	Not Detected
Ethene	0.0023	Not Detected
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: VW99(10)100209

Lab ID#: 0910198B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101426	Date of Collection: 10/2/09 4:25:00 PM
Dil. Factor:	2.24	Date of Analysis: 10/14/09 06:35 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	7.2
Nitrogen	0.22	86
Carbon Monoxide	0.022	Not Detected
Methane	0.00022	0.63
Carbon Dioxide	0.022	5.8
Ethane	0.0022	Not Detected
Ethene	0.0022	Not Detected
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: VW99(10)100209 Lab Duplicate

Lab ID#: 0910198B-02AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101427	Date of Collection: 10/2/09 4:25:00 PM
Dil. Factor:	2.24	Date of Analysis: 10/14/09 06:56 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	7.1
Nitrogen	0.22	86
Carbon Monoxide	0.022	Not Detected
Methane	0.00022	0.63
Carbon Dioxide	0.022	5.7
Ethane	0.0022	Not Detected
Ethene	0.0022	Not Detected
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: VW99(15)100209

Lab ID#: 0910198B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101428	Date of Collection: 10/2/09 3:57:00 PM
Dil. Factor:	2.33	Date of Analysis: 10/14/09 07:20 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.8
Nitrogen	0.23	82
Carbon Monoxide	0.023	Not Detected
Methane	0.00023	5.9
Carbon Dioxide	0.023	10
Ethane	0.0023	Not Detected
Ethene	0.0023	Not Detected
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: VW99(20)100209

Lab ID#: 0910198B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101430	Date of Collection: 10/2/09 3:30:00 PM
Dil. Factor:	2.33	Date of Analysis: 10/14/09 08:02 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.7
Nitrogen	0.23	78
Carbon Monoxide	0.023	Not Detected
Methane	0.00023	8.5
Carbon Dioxide	0.023	11
Ethane	0.0023	0.0026
Ethene	0.0023	Not Detected
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: VW99(25)100209

Lab ID#: 0910198B-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101431	Date of Collection: 10/2/09 2:57:00 PM
Dil. Factor:	2.29	Date of Analysis: 10/14/09 08:24 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.8
Nitrogen	0.23	82
Carbon Monoxide	0.023	Not Detected
Methane	0.00023	5.4
Carbon Dioxide	0.023	11
Ethane	0.0023	Not Detected
Ethene	0.0023	Not Detected
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: VW99(30)100209

Lab ID#: 0910198B-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101432	Date of Collection: 10/2/09 2:20:00 PM
Dil. Factor:	2.42	Date of Analysis: 10/14/09 09:12 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	2.1
Nitrogen	0.24	78
Carbon Monoxide	0.024	Not Detected
Methane	0.00024	8.8
Carbon Dioxide	0.024	11
Ethane	0.0024	0.0026
Ethene	0.0024	Not Detected
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: VW99(35)100209

Lab ID#: 0910198B-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101433	Date of Collection: 10/2/09 2:38:00 PM
Dil. Factor:	2.24	Date of Analysis: 10/14/09 09:49 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	1.6
Nitrogen	0.22	76
Carbon Monoxide	0.022	Not Detected
Methane	0.00022	11
Carbon Dioxide	0.022	11
Ethane	0.0022	0.0034
Ethene	0.0022	Not Detected
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: VW99(40)100209

Lab ID#: 0910198B-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101434	Date of Collection: 10/2/09 1:14:00 PM
Dil. Factor:	2.38	Date of Analysis: 10/14/09 10:11 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	1.7
Nitrogen	0.24	76
Carbon Monoxide	0.024	Not Detected
Methane	0.00024	11
Carbon Dioxide	0.024	11
Ethane	0.0024	0.0035
Ethene	0.0024	Not Detected
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: VW99(45)100209

Lab ID#: 0910198B-09A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101435	Date of Collection: 10/2/09 12:38:00 PM
Dil. Factor:	2.33	Date of Analysis: 10/14/09 10:51 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.8
Nitrogen	0.23	76
Carbon Monoxide	0.023	Not Detected
Methane	0.00023	11
Carbon Dioxide	0.023	11
Ethane	0.0023	0.0034
Ethene	0.0023	Not Detected
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: BD1100209

Lab ID#: 0910198B-10A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101436	Date of Collection: 10/2/09
Dil. Factor:	2.52	Date of Analysis: 10/14/09 11:44 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	1.8
Nitrogen	0.25	77
Carbon Monoxide	0.025	Not Detected
Methane	0.00025	9.2
Carbon Dioxide	0.025	12
Ethane	0.0025	0.0027
Ethene	0.0025	Not Detected
Helium	0.13	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: VW96(50)100209

Lab ID#: 0910198B-11A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101437	Date of Collection: 10/2/09 11:55:00 AM
Dil. Factor:	2.29	Date of Analysis: 10/15/09 07:13 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	2.3
Nitrogen	0.23	68
Carbon Monoxide	0.023	Not Detected
Methane	0.00023	19
Carbon Dioxide	0.023	10
Ethane	0.0023	0.0095
Ethene	0.0023	Not Detected
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: VW96(55)100209

Lab ID#: 0910198B-12A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101438	Date of Collection: 10/2/09 11:05:00 AM
Dil. Factor:	2.29	Date of Analysis: 10/15/09 07:37 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.4
Nitrogen	0.23	67
Carbon Monoxide	0.023	Not Detected
Methane	0.00023	20
Carbon Dioxide	0.023	11
Ethane	0.0023	0.0099
Ethene	0.0023	Not Detected
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: VW96(60)100209

Lab ID#: 0910198B-13A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101439	Date of Collection: 10/2/09 12:48:00 PM
Dil. Factor:	2.29	Date of Analysis: 10/15/09 08:04 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.1
Nitrogen	0.23	67
Carbon Monoxide	0.023	Not Detected
Methane	0.00023	20
Carbon Dioxide	0.023	11
Ethane	0.0023	0.0096
Ethene	0.0023	Not Detected
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: VW99(50)100209

Lab ID#: 0910198B-14A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101440	Date of Collection: 10/2/09 11:08:00 AM
Dil. Factor:	2.24	Date of Analysis: 10/15/09 08:27 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	2.3
Nitrogen	0.22	77
Carbon Monoxide	0.022	Not Detected
Methane	0.00022	10
Carbon Dioxide	0.022	10
Ethane	0.0022	0.0039
Ethene	0.0022	Not Detected
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: VW99(55)100209

Lab ID#: 0910198B-15A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101441	Date of Collection: 10/2/09 11:36:00 AM
Dil. Factor:	2.42	Date of Analysis: 10/15/09 08:52 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	2.1
Nitrogen	0.24	75
Carbon Monoxide	0.024	Not Detected
Methane	0.00024	11
Carbon Dioxide	0.024	11
Ethane	0.0024	0.0038
Ethene	0.0024	Not Detected
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: VW99(55)100209 Lab Duplicate

Lab ID#: 0910198B-15AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101445	Date of Collection: 10/2/09 11:36:00 AM
Dil. Factor:	2.42	Date of Analysis: 10/15/09 10:24 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	2.1
Nitrogen	0.24	75
Carbon Monoxide	0.024	Not Detected
Methane	0.00024	11
Carbon Dioxide	0.024	11
Ethane	0.0024	0.0037
Ethene	0.0024	Not Detected
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: VW99(60)100209

Lab ID#: 0910198B-16A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101442	Date of Collection: 10/2/09 12:05:00 PM
Dil. Factor:	2.33	Date of Analysis: 10/15/09 09:16 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	4.8
Nitrogen	0.23	86
Carbon Monoxide	0.023	Not Detected
Methane	0.00023	1.0
Carbon Dioxide	0.023	8.0
Ethane	0.0023	Not Detected
Ethene	0.0023	Not Detected
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: TB-1, 100209

Lab ID#: 0910198B-17A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101444	Date of Collection: 10/2/09
Dil. Factor:	1.00	Date of Analysis: 10/15/09 10:02 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	0.17
Nitrogen	0.10	100
Carbon Monoxide	0.010	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected
Ethane	0.0010	Not Detected
Ethene	0.0010	Not Detected
Helium	0.050	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Client Sample ID: Lab Blank

Lab ID#: 0910198B-18A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9101421	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/09 04:45 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Nitrogen	0.10	Not Detected
Carbon Monoxide	0.010	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected
Ethane	0.0010	Not Detected
Ethene	0.0010	Not Detected

Container Type: NA - Not Applicable

Client Sample ID: Lab Blank

Lab ID#: 0910198B-18B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: 9101420b
Dil. Factor: 1.00

Date of Collection: NA
Date of Analysis: 10/14/09 04:22 PM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.050	Not Detected

Container Type: NA - Not Applicable

Client Sample ID: LCS

Lab ID#: 0910198B-19A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: 9101446
Dil. Factor: 1.00

Date of Collection: NA
Date of Analysis: 10/15/09 10:49 AM

Compound	%Recovery
Oxygen	102
Nitrogen	102
Carbon Monoxide	105
Methane	102
Carbon Dioxide	103
Ethane	101
Ethene	101
Helium	103

Container Type: NA - Not Applicable